

B13
Contd.

tracked by the auto-matching facility until the end of the etch step when the auto-matching is again disabled, and the matching unit settings are driven to the values required for the deposition step. The sequence of operations is shown in Figure 2.

In the Claims²

Kindly rewrite Claims 1, 2, 5, 9, 19, 26, 31, 33 and 35 to read as follows:

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Sub 1.1

1. (Amended) A method of processing a workpiece in a chamber, the method comprising:

- (a) striking a plasma in the chamber;
- (b) treating the workpiece by cyclically adjusting the processing parameters between at least a first step having a first set of processing parameters and a second step having a second set of process parameters; and
- (c) stabilizing the plasma during the transition between the first and second steps.

Sub 2.1

2. (Amended) A method according to Claim 1, wherein the plasma is stabilized between each cyclic step.

² A copy of any revised claims showing additions and deletions thereto is attached as ATTACHMENT "B".

B15-5b
C3

5. (Twice amended) A method according to Claim 1, wherein the plasma is stabilized by matching the impedance of the plasma to the impedance of the power supply which provides energy to the plasma by means of a matching unit.

B14-5b
C3

9. (Amended) A method according to Claim 8, wherein automatic matching is enabled when the chamber pressure and/or other parameters have stabilized.

B17-5b
C4

19. (Twice amended) A method according to Claim 1, wherein stabilization of the plasma is enhanced by substantially preventing or reducing variation of the pressure in the chamber between the first and second steps.

B18

26. (Twice amended) A method according to Claim 1, wherein stabilization of the plasma is enhanced by feeding a further gas into the chamber.

B19

31. (Amended) A method of processing a workpiece in a chamber, the method comprising:

- (a) striking a plasma in the chamber;
- (b) treating the workpiece by cyclically adjusting the processing parameters between at least a first step having a first set of

processing parameters and a second step having a second set of
process parameters; and

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(c) stabilizing the plasma during the transition between the first and
second steps,

wherein stabilization of the plasma is enhanced by substantially preventing
or reducing variation of the pressure in the chamber between the first and second
steps, and

wherein the chamber is provided with a portion separated from the main
part of the chamber by a deflectable member.

B20
shes
33. (Amended) A plasma processing apparatus comprising a chamber
having a support for a workpiece, means for striking a plasma in the chamber,
means for cyclically adjusting processing parameters between a first and a second
step, and means for stabilizing the plasma during the transition between the first
and second steps.

B
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shes
35. (Twice amended) A plasma processing apparatus according to Claim
33, wherein the stabilizing means comprises means to vary the RF power supply
frequency, or means for reducing the variation of the pressure in the chamber
between the first and second steps.